Mathematics

Long Term Plan

Year 3

Updated June 2023

To be read in conjunction with the Calculation Policy

Year 3 Long Term Plan

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13
Autumn	NUMBER Place Value			NUMBER Addition and Subtraction *Including explicit teaching of mental methods*				PiXL Assessments	NUMBER Multiplication and Division A *Including explicit teaching of mental methods* MWE | Maths Week England				NUMBER Multiplication and Division B
Spring	NUMBER Multiplication and Division B continued		MEASUREMENT Length and Perimeter		NUMBER Fractions A	PiXL Assessments	NUMBER Fractions A continued		MEASUREMENT Mass and Capacity		GEOMETRY Shape		
Summer	NUMBER Fractions B		MEASUREMENT Money		MEASUREMENT Time		Statistics	PiXL Assessments	Consolidation of RTP's PiXL Analysis Focus Times Tables Focus YE YOUNG enterprise My Money Maths				

Year 3 Medium Term Plan

Autumn Term	Weeks 1-3	Weeks 4-7	Week 8	Weeks 9-12 Maths Week England	Week 13
Domain	Place Value	Addition and Subtraction	PiXL Assessments	Multiplication and Division A	Multiplication and Division B
NC Objective	★ Identify, represent and estimate numbers using different representations ★ Recognise the place value of each digit in a 3-digit number (hundreds, tens, ones) ★ Count from zero in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number ★ Read and write numbers up to 1,000 in numerals and words ★ Compare and order numbers up to 1,000 **Ensure coverage of:** ★ Solve number problems and practical problems involving these ideas.	★ Add and subtract numbers mentally, including: • a 3-digit number and ones • a 3-digit number and tens • a 3-digit number and hundreds ★ Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction ★ Estimate the answer to a calculation and use inverse operations to check answers ★ Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction **Although formal algebraic notation is not introduced until Y6, algebraic thinking starts much earlier as exemplified by the 'missing number' objectives from Y1/2/3**		MWE **Maths Week England will be celebrated during this block with a set focus** ★ Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables ★ Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods	★ Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables ★ Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods ★ Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which *n* objects are connected to *m* objects
Smaller Steps (WRM)	Step 1 Represent numbers to 100 Step 2 Partition numbers to 100 Step 3 Number line to 100 Step 4 Hundreds Step 5 Represent numbers to 1,000 Step 6 Partition numbers to 1,000 Step 7 Flexible partitioning of numbers to 1,000 Step 8 Hundreds, tens and ones Step 9 Find 1, 10 or 100 more or less Step 10 Number line to 1,000 Step 11 Estimate on a number line to 1,000 Step 12 Compare numbers to 1,000 Step 13 Order numbers to 1,000 Step 14 Count in 50s	Step 1 Apply number bonds within 10 Step 2 Add and subtract 1s Step 3 Add and subtract 10s Step 4 Add and subtract 100s Step 5 Spot the pattern Step 6 Add 1s across a 10 Step 7 Add 10s across a 100 Step 8 Subtract 1s across a10 Step 9 Subtract 10s across a 100 Step 10 Make connections Step 11 Add two numbers (no exchange) Step 12 Subtract two numbers (no exchange) Step 13 Add two numbers (across a 10) Step 14 Add two numbers (across a 100) Step 15 Subtract two numbers (across a 10) Step 16 Subtract two numbers (across a 100)		Step 1 Multiplication – equal groups Step 2 Use arrays Step 3 Multiples of 2 Step 4 Multiples of 5 and 10 Step 5 Sharing and grouping Step 6 Multiply by 3 Step 7 Divide by 3 Step 8 The 3 times-table Step 9 Multiply by 4 Step 10 Divide by 4 Step 11 The 4 times-table Step 12 Multiply by 8 Step 13 Divide by 8 Step 14 The 8 times-table Step 15 The 2, 4 and 8 times-tables	Step 1 Multiples of 10 Step 2 Related calculations Step 3 Reasoning about multiplication Step 4 Multiply a 2-digit number by a 1-digit number – no exchange Step 5 Multiply a 2-digit number by a 1-digit number – with exchange

		Step 17 Add 2-digit and 3-digit numbers Step 18 Subtract a 2-digit number from a 3-digit number Step 19 Complements to 100 Step 20 Estimate answers Step 21 Inverse operations Step 22 Make decisions			
RTP's	★ 3NPV-1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10 • **Step 4–Hundreds** ★ 3NPV-2 Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning • **Step 5–Represent numbers to 1,000** • **Step 6–Partition numbers to 1,000** • **Step 7–Flexible partitioning of numbers to 1,000** • **Step 8–Hundreds, tens and ones** ★ 3NPV-3 Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 • **Step 9–Find 1, 10 or 100 more or less** • **Step 10–Number line to 1,000** • **Step 11-Estimate on a number line to 1,000** • **Step 12–Compare numbers to 1,000** • **Step 13–Order numbers to 1,000** ★ 3NPV-4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts • **Step 10–Number line to 1,000** • **Step 11–Estimate on a number line to 1,000** • **Step 14–Count in 50s**	★ 3NPV-1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10 • **Step 10–Make connections** ★ 3NF-1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice • **Step 6–Add 1s across a 10** • **Step 7–Add 10s across a 100** • **Step 8–Subtract 1s across a 10** • **Step 9–Subtract 1s across a 100** • **Step 13–Add two numbers (across a 10)** • **Step 14–Add two numbers (across a 100)** • **Step 15–Subtract two numbers (across a 10)** • **Step 16–Subtract two numbers (across a 100)** ★ 3AS-1 Calculate complements to 100 • **Step 19–Complements to 100** ★ 3AS-2 Add and subtract up to three-digit numbers using columnar methods • **Step 11–Add two numbers (no exchange)** • **Step 12–Subtract two numbers (no exchange)** • **Step 13–Add two numbers (across a 10)** • **Step 14–Add two numbers (across a 100)** • **Step 15–Subtract two numbers (across a 10)** • **Step 16–Subtract two numbers (across a 100)** • **Step 17–Add 2-digit and 3-digit numbers** • **Step 18–Subtract a 2-digit number from a 3-digit number** ★ 3AS-3 Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part–part–whole structure. Understand and use the commutative property of addition and understand the related property for subtraction • **Step 21–Inverse operations** • **Step 22–Make decisions**		★ 3NPV-1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10 • **Step 4–Multiples of 5 and 10** ★ 3NF-2 Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number • **Step 3–Multiples of 2** • **Step 4–Multiples of 5 and 10** • **Step 5–Sharing and grouping** • **Step 9–Multiply by 4** • **Step 10–Divide by 4** • **Step 11–The 4 times-table** ★ 3MD-1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division • **All 15 steps in this block relate to this criterion**	★ 3NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10) • **Step 1–Multiples of 10** • **Step 2–Related calculations** ★ 3MD-1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division • **All 11 steps in this block relate to this criterion**

Year 3 Medium Term Plan

Spring Term	Weeks 1-2	Weeks 3-4	Week 5	Week 6	Weeks 7-8	Weeks 9-10	Weeks 11-12
Domain	Multiplication and Division B	Length and Perimeter	Fractions A		Fractions A continued	Mass and Capacity	Properties of Shape
NC Objective	★ Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables ★ Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods ★ Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which *n* objects are connected to *m* objects	★ Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) ★ Measure the perimeter of simple 2-D shapes	★ Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 ★ Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators ★ Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators ★ Recognise and show, using diagrams, equivalent fractions with small denominators ★ Compare and order unit fractions, and fractions with the same denominators ★ Solve problems that involve all of the above	PiXL Assessments	★ Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 ★ Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators ★ Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators ★ Recognise and show, using diagrams, equivalent fractions with small denominators ★ Compare and order unit fractions, and fractions with the same denominators ★ Solve problems that involve all of the above	★ Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	★ Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them ★ Recognise angles as a property of shape or a description of a turn ★ Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle ★ Identify horizontal and vertical lines and pairs of perpendicular and parallel lines
Smaller Steps (WRM)	Step 6 Link multiplication and division Step 7 Divide a 2-digit number by a 1-digit number – no exchange Step 8 Divide a 2-digit number by a 1-digit number – flexible partitioning Step 9 Divide a 2-digit number by a 1-digit number – with remainders Step 10 Scaling Step 11 How many ways?	Step 1 Measure in metres and centimetres Step 2 Measure in millimetres Step 3 Measure in centimetres and millimetres Step 4 Metres, centimetres and millimetres Step 5 Equivalent lengths (metres and centimetres) Step 6 Equivalent lengths (centimetres and millimetres) Step 7 Compare lengths Step 8 Add lengths Step 9 Subtract lengths Step 10 What is perimeter? Step 11 Measure perimeter Step 12 Calculate perimeter	Step 1 Understand the denominators of unit fractions Step 2 Compare and order unit fractions Step 3 Understand the numerators of non-unit fractions Step 4 Understand the whole		Step 5 Compare and order non-unit fractions Step 6 Fractions and scales Step 7 Fractions on a number line Step 8 Count in fractions on a number line Step 9 Equivalent fractions on a number line Step 10 Equivalent fractions as bar models	Step 1 Use scales Step 2 Measure mass in grams Step 3 Measure mass in kilograms and grams Step 4 Equivalent masses (kilograms and grams) Step 5 Compare mass Step 6 Add and subtract mass Step 7 Measure capacity and volume in millilitres Step 8 Measure capacity and volume in litres and millilitres Step 9 Equivalent capacities and volumes (litres and millilitres) Step 10 Compare capacity and volume Step 11 Add and subtract capacity and volume	Step 1 Turns and angles Step 2 Right angles Step 3 Compare angles Step 4 Measure and draw accurately Step 5 Horizontal and vertical Step 6 Parallel and perpendicular Step 7 Recognise and describe 2-D shapes Step 8 Draw polygons Step 9 Recognise and describe 3-D shapes Step 10 Make 3-D shapes

RTP's	★ 3NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10) • **Step 10–Scaling** ★ 3MD-1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division • **All 11 steps in this block relate to this criterion**	★ 3NPV-1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10 • **Step 5–Equivalent lengths (metres and centimetres)** • **Step 6–Equivalent lengths (centimetres and millimetres)** ★ 3NPV-4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts. • **Step 1–Measure in metres and centimetres** • **Step 2–Measure in millimetres** • **Step 3–Measure in centimetres and millimetres**	★ 3F-1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts • **Step 1–Understand the denominators of unit fractions** • **Step 3–Understand the numerators of non-unit fractions** • **Step 4–Understand the whole** ★ 3F-3 Reason about the location of any fraction within 1 in the linear number system • **Step 2–Compare and order unit fractions**		★ 3F-3 Reason about the location of any fraction within 1 in the linear number system • **Step 5–Compare and order non-unit fractions** • **Step 7–Fractions on a number line** • **Step 8–Count in fractions on a number line** ★ 3NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10) • **Step 6–Fractions and scales** • **Step 9–Equivalent fractions on a number line** • **Step 10–Equivalent fractions as bar models in fractions on a number line**		★ 3G-1 Recognise right angles as a property of shape or a description of a turn and identify right angles in 2D shapes presented in different orientations • **Step 2–Right angles** ★ 3G-2 Draw polygons by joining marked points and identify parallel and perpendicular sides • **Step 6–Parallel and perpendicular** • **Step 8–Draw polygons**

Year 3 Medium Term Plan

Summer Term	Weeks 1-2	Weeks 3-4	Weeks 5-6	Week 7	Week 8	Weeks 9-12 My Money Maths
Domain	Fractions B	Money	Time	Statistics	PiXL Assessments	Consolidation of RTP's and Times Tables
NC Objective	★ Add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$] ★ Solve problems that involve all of the above	★ Add and subtract amounts of money to give change, using both £ and p in practical contexts	★ Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks ★ Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight ★ Know the number of seconds in a minute and the number of days in each month, year and leap year ★ Compare durations of events [for example to calculate the time taken by particular events or tasks]	★ Interpret and present data using bar charts, pictograms and tables ★ Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables		Young Enterprise 'My Money Maths' will take place during this block with a set focus This time is also used to consolidate: ★ RTP's that need revisiting ★ Areas of concern through the PiXL analysis ★ Times Tables
Smaller Steps (WRM)	Step 1 Add fractions Step 2 Subtract fractions Step 3 Partition the whole Step 4 Unit fractions of a set of objects Step 5 Non-unit fractions of a set of objects Step 6 Reasoning with fractions of an amount	Step 1 Pounds and pence Step 2 Convert pounds and pence Step 3 Add money Step 4 Subtract money Step 5 Find change	Step 1 Roman numerals to 12 Step 2 Tell the time to 5 minutes Step 3 Tell the time to the minute Step 4 Read time on a digital clock Step 5 Use am and pm Step 6 Years, months and days Step 7 Days and hours Step 8 Hours and minutes – use start and end times Step 9 Hours and minutes - use durations Step 10 Minutes and seconds Step 11 Units of time Step 12 Solve problems with time	Step 1 Interpret pictograms Step 2 Draw pictograms Step 3 Interpret bar charts Step 4 Draw bar charts Step 5 Collect and represent data Step 6 Two-way tables		
RTP's	★ 3F-2 Find unit fractions of quantities using known division facts (multiplication tables fluency) • **Step 4-Unit fractions of a set of objects** ★ 3F-4 Add and subtract fractions with the same denominator, within 1 • **Step 1-Add fractions** • **Step 2-Subtract fractions**	★ 3AS-1 Calculate complements to 100 • **Step 4-Subtract money** • **Step 5-Find change** ★ 3AS-3 Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part-part-whole structure. Understand and use the commutative property of addition and understand the related property for subtraction • **Step 3-Add money** • **Step 4-Subtract money** • **Step 5-Find change**				